

Git

Week 08 Tutorial 07
Configuration Management
(Version Control)

So what is Git?

- Version Control System
- Made by Linus Torvalds! (developer of the Linux kernel)



Git Advantages

- Distributed (everyone has their own code repository local to them!)
- Open Source (everyone likes open source code :))



General Git Workflow

1. `git init`
2. `git add filename`
3. `git commit -m "Initial commit"`
4. `git push origin master`



Git Concept: **Init**

What does it do: Initializes a Git repository locally

Example command:

git init



Git Concept: **Clone**

What does it do: Clones an entire Git repository, similar to svn checkout but you get the whole copy, so for a Git repository with a lot of history, this operation can potentially take a while

Example command:

```
git clone https://github.com/tiow/swen90016_workshop05
```



Git Concept: Status

What does it do: Shows you the status of your current repository which shows files to be added, modified and untracked files as well.

Example command:

`git status`

```
# On branch master
# Changes to be committed:
# (use "git reset HEAD <file>..." to unstage)
#
#modified:   hello.py
#
# Changes not staged for commit:
# (use "git add <file>..." to update what will be committed
# (use "git checkout -- <file>..." to discard changes in wo
#
#modified:   main.py
#
# Untracked files:
# (use "git add <file>..." to include in what will be commi
#
#hello.pyc
```

Git Concept: **Add / Remove**

What does it do: As you can probably tell from the name, it adds or removes a file!

Example command:

git add filename OR git rm filename



Git Concept: **Commit**

What does it do: This commits your changes to the repository. If you don't do this, your changes will not be saved!

Example command:

```
git commit -m "Some Message!"
```

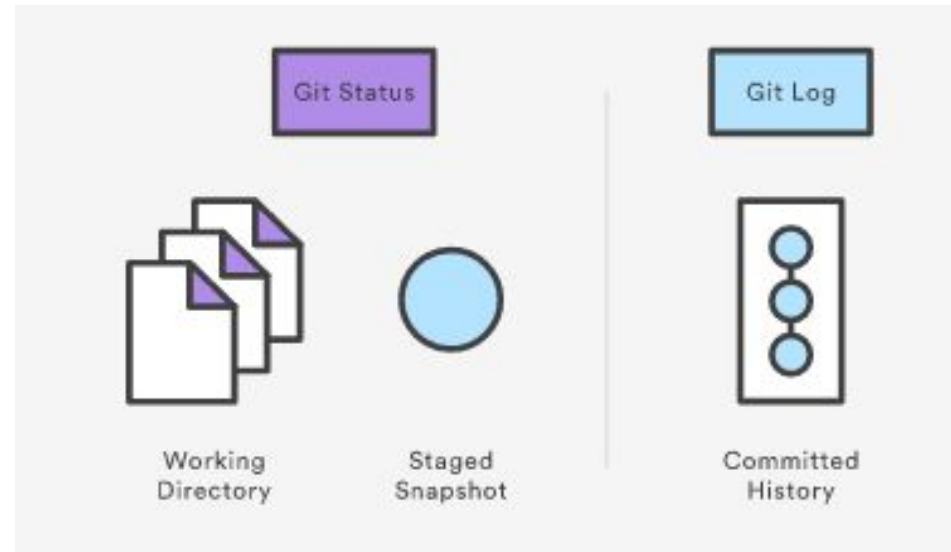


Git Concept: **Log**

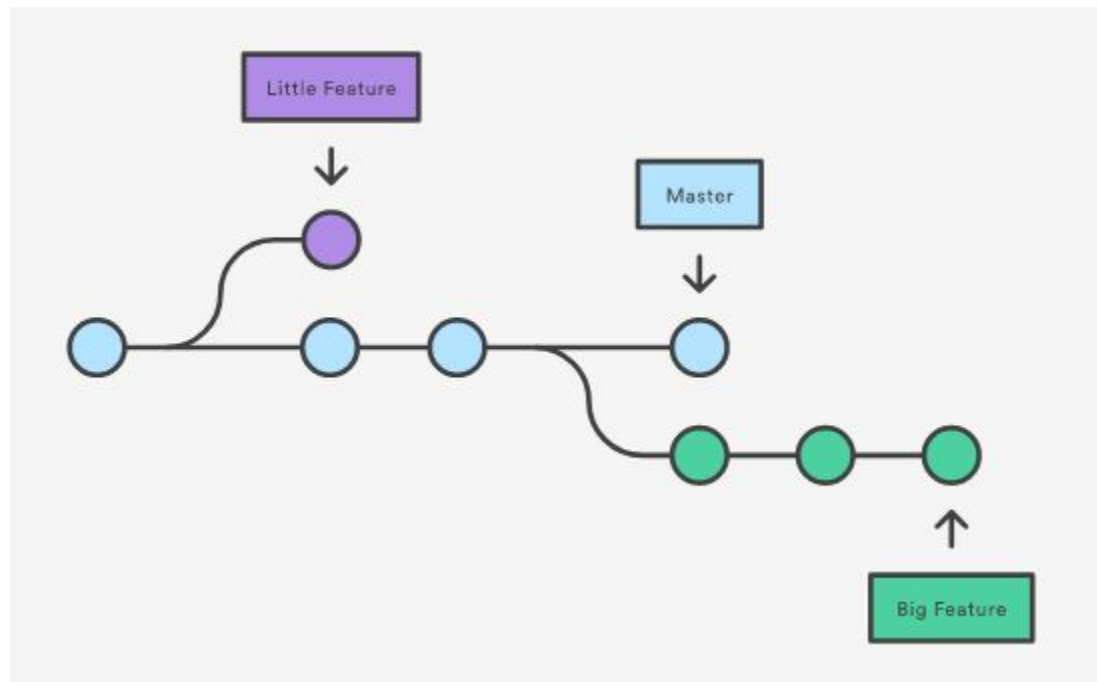
What does it do: Shows the history of commits into the system.

Example command:

git log



Git Concept: Branching



And Many More!

References:

<https://www.atlassian.com/git/tutorials>

<https://git-scm.com/>

